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BEGINNING OF CIVILIZATION IN SOUTH INDIA

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Introduction

By ' civilization ' one normally understands a refined culture, state, society or individual. Originally this word was applied by Greeks to foreigners who were rude, uncultured and above all illiterate, not knowing the art of writing. From this *stricto sensu*, or original meaning, archæologists, anthropologists and culture-historians have slightly deviated. These scholars use the word ' civilization ' primarily to define a stage in the material and cultural development of man, when man had emerged from the stage of food-collection (by hunting, fishing and gathering wild fruits and edible plants and roots) and had settled down at one place and acquired the art of agriculture, domestication of animals, making of pottery, houses—some of them monumental like temples, fortifications (even palaces)—and above all learned the art of writing. The last—knowledge of writing or literacy—is regarded (was regarded until recently) as one of the fundamental requirements which helped a culture-historian to distinguish between various kinds of cultures discovered by archæologists or described in ancient literatures of the world.

Thus the Vedic and the earliest Greek ways of life or society for all their richness—heroic deeds and descriptions of gods and goddesses—were regarded as barbarous and not civilized. Even now the UNESCO *History of Civilization* following the anthropological definition of civilization describes the Vedic period in our history as barbarous or semi-barbarous. As opposed to this, the Indus or the Harappan Culture is called the Indus Civilization,

because here for the first time we see not only a well-organized society, but monumental buildings and the first traces of writing.

However, one should realize that there are intermediate stages between preliterate and literate stages of development and also other important criteria in the material and cultural development of man. It is these that we have to take into consideration for understanding the beginning of civilization in South India.

" South India " for at least 2,000 years and more is understood to be the country south of the Narmada or properly country south of the river Krishna. This is the ancient *Dakṣiṇā-patha.* This definition of South India is not confined to the extreme south, at present—included in the district of Tirunelveli or the country included in Tamilnadu. Without further academic discussion, I would include all that country in South India which is geologically the oldest part in India and in the world. This is the area which extends from Raichur in the north and terminates somewhere at Rameshvaram; on the east and the west the coastal tracts are comparatively recent (geologically). This vast region is of course divisible geologically into two or three further sub-zones. But this is not materially important to us. What concerns us most are the various stages which we can discern in this vast area beginning from the very earliest stage when man was a hunter and then advanced progressively to the stage when he began to live in permanent houses, domesticated animals, had pots and pans and had taken the first conscious step in agriculture.

Fortunately owing to the work during the last thirty years and more we are able to see, however dimly, the various stages by which man reached the stage of civilization.

First Stage

The earliest stage is seen not only in and around Madras in the district of Chingleput, where the first tools of man were found, but in almost all the districts of Andhra and the eastern districts of Mysore and the northern districts of Tamilnad, excluding the far south. In all these areas, we have got large, crude stone tools, called handaxes and cleavers by archæologists. Whatever

be the name of these tools, there is no doubt that with these heavy tools man could perform some of the most elementary functions and eke out a living. He could cut trees, dig out roots, and skin and chop the animals he hunted. Unfortunately, we have no evidence so far of the animals he hunted at this time nor of the trees he felled and the forests in which he lived. So this earliest stage of man remains comparatively very, very dim for us. At the most we can say that the climate in South India at that time was far more humid than it is today, so that all the rivers carried huge boulders in the river bed and these were deposited all along their bed when their carrying power was reduced. In Madras or around Madras, the climate was far more humid earlier, because here we have got deposits called laterite. These normally form when the rainfall is over 100 inches, and is followed by a long dry period. If we are allowed to extrapolate the evidence from Maharashtra, parts of Andhra, U.P., West Bengal and Madhya Pradesh, we may say that at this time large tusked elephant, wild ox and three-toed horse and other animals should have been living in South India, and these must have provided food to man.

From the large number of tools found in and around Madras, in many districts of Andhra and Mysore, one might also say that the population of early man at this time was fairly thick and well distributed. Man was spread out along the banks of smaller and larger rivers and was found in large numbers near foothills where raw material was easily available.

Stage I-A

How long man remained in this very primitive stage we cannot say. At Attirampakkam, near Madras, at Giddalur, District Kurnool, at Anagwadi, District Bijapur, for instance, we find tools which are comparatively light and beautifully finished showing that this man, though a hunter-fisher, had developed an artistic sense. And possibly the tools which are sharp all round must have been used in different ways in hunting. At least all over South India as well as in the north we see a definite development in the man's tools which must be the result of his mental development.

Second Stage

What happened to this man is unknown. So far no physical remains of this early man have been found anywhere in India. But we do know that all over South India beginning with Attirampakkam in the south and extending upto Bijapur in the north, these heavy but finely made tools were given up by man. In Bijapur and in many parts of Andhra, the man had also given up the use of quartzite. He now preferred still better, fine-grained rocks. His tools and weapons are much smaller and may have provided him with spear-heads, lance-heads and the variety of scrapers used for smoothing the wooden and bone shafts of several other tools and weapons. It must be emphasised that even this second Stone Age man was still a hunter. But the methods by which he hunted must have changed a great deal. Since his tools were small, he could carry these tools into the interior where raw material was not easily available. Thus a much larger area than before was penetrated by man. We may call this stage as advanced hunting and food collecting stage. No remains of contemporary animals have been found. The earlier species continued to live.

Third Stage

The man who followed is documented from excavations at Attirampakkam, from the Rallakalava, near Renigunta, District Chittoor and from several sites in Kurnool District. Instead of large number of points and several kinds of scrapers we get thin, long flakes called blades by archæologists. Among these blades we notice tools which could have been used for no other purpose than for engraving on wood and bone. Even those who are not archæologists when they see these delicate tools will be reminded of our present steel chisels and other tools used by carpenters and other craftsmen. So this stage is a definite advance on the two previous stages of man. Still we have to call this man a food-collector, however advanced he may be in the production of stone tools. Unfortunately not much is known of this man. But further information can be had if more systematic work is carried out. The most important sites from my point of view are the caves around Madras and in Kurnool District where some 60 years ago,

Robert Bruce Foote had found not only such fine tools, but even artistic work in bone which he then compared with similar work discovered at that time in the caves of France and called Upper Palæolithic by archæologists. Unfortunately all the collections made by Foote have been lost, but I am quite sure that if we make a genuine attempt with all the knowledge we have got of excavations today then the caves in Kurnool and possibly in Chittoor and in Madras will give us important evidence of this advanced hunting stage of man.

Fourth Stage

From this advanced stage, we find that man had changed again. His tools have become still smaller. These no doubt had developed from the very fine blades which we witness on the Rallakalava and at Attirampakkam and at many sites in Kurnool. The tools and weapons are so small that we call them microliths (small stone implements). Though small, still these are the precursors of our modern tools and weapons in copper, bronze and iron because for the first time that man has discovered the principle of compound tool. He hafted the tools in a bone or a wood as teeth (though unfortunately we have not yet secured from any site in India these evidences, though these denticulated tools have been found in Egypt, Palestine, Mesopotamia and Europe). Hence in some Indian languages these iron sickles are called " toothed tools ", though they have no teeth now. But these local " vulgar " names undoubtedly show the ancestry of these iron sickles. Until very recently these small tools, called microliths, were found on the surface. But now at Sangankal near Bellary these have been found sandwiched between the layers containing tools of the late Early Stone Age or Middle Stone Age and tools of the New Stone Age when man had definitely taken to agriculture and domestication of animals. So this transitional stage called " Mesolithic " is extremely important and comparatively very well dated now. The evidence for this is also found in the fossil sand-dunes in the far south at Tirunelveli. We can date it provisionally to 4000 B.C. or earlier. The small tools were used for various purposes: for hunting the animals with a bow and

an arrow: as harpoons for fishing, and also used as sickle-teeth for very primitive harvesting: cutting the stalks naturally growing tall grasses. Thus these small tools do indicate a very great step taken by man towards what is called economic self-sufficiency. He was not completely dependent on animal food or wild plants, edible fruits and things like that. He could collect wild grass by reaping and thus the first foundation of agriculture was laid. These tools have been found everywhere in South India in the red soil as my travel from Hyderabad in the north to south has shown and also one can use the reports of other field workers. Thus this is a very widespread state of man very well documented from all over South India. Unfortunately so little work has been done by way of excavation that we are not able to get the conditions or environment in which man lived. In some places like Sangankal, it appears that the climate was comparatively more humid than it is today or before this man lived, whereas the same thing is indicated by the fossil sand-dunes at Tirunelveli. But these are speculations which need to be put on a much more firmer foundation by a combined team of archæologists and workers from other disciplines, just as we have done at the Deccan College with the data from Kupgal mound, at Sangankal.

Fifth Stage

So far I have been merely describing to you the four stages by which man had arrived at the beginning of agriculture, but had not yet taken the first steps in agriculture. When I say this I mean conscious attempt at ploughing the land or preparing the land for sowing the seeds and for harvesting and also water the land with some kind of irrigation. This we witness very well in the eastern districts of Mysore and the western districts of Andhra and the northern districts of Madras. The first steps—conscious steps—towards civilization were taken on the granite hills in South India. These hills look picturesque and foreboding. They look like castles from a distance; huge boulders on their periphery and as one goes nearer one sees huge boulders perched on one another as if placed by man and some about to fall at any moment. But these are there for the last 5,000 years and more and if one takes

the trouble of climbing these hills which are 300 to 600 ft. high (as I have done in the districts of Raichur, Bellary and North Arcot and Chitaldurg), then one finds after climbing up a beautifully enclosed area, yet fairly flat. These flat areas were inhabited by man around 2000 B.C. These are the earliest settlements of man. Until now man moved from place to place. He was a hunter, and so went after the animals he hunted. But now he had chosen to remain at one place. As soon as man took this first step of settling down he was in need of houses and of pots and pans in which he could store his food as well as the water he collected either from some streams at a distance or from the place nearby. We have also some evidence from our excavations at Tekkalkota, District Bellary and at Hallur, District Dharwar and at Palavoy, District Anantapur that this man cultivated Hurali (Kan), Ulavalu (Tel), Kollu (Tam) or Kulthi (Hindi) and ragi (horsegram and finger millet respectively): two of the most staple items of food of the agriculturists in South India. Both *rāgi* and *kollu* flourish on sandy, lateritic, even hilly areas. And it is perhaps not a coincidence that the areas of the maximum concentration of the Neolithic and megalithic sites overlap with that of *rāgi* and *kollu.* It is interesting to note that both these grains as well as greengram later occur at Paiyampali, North Arcot District (*I.A.R.*, 1964, p. 38).

These people besides making use of natural rock-shelters on these hills built " houses ", indeed small huts, which were usually round, supported by round wooden posts (about 2 to 3 ft. in diameter). These huts were covered with split bamboo screen, and occasionally the walls were partly or wholly plastered with clay mixed with cow-dung. The roofs were presumably conical and invariably thatched. Some of these huts have 15 ft. (about 5 metres) in width. The floors were levelled by placing flat-topped stones and then bonded with clay and finally plastered with lime. The minimum " furniture " inside these huts consisted of a fire place made of three stones or as at Hallur of a small pit sunk into the floor, and a storage jar which stood on three terracotta legs. Within the empty space (*i.e.* the base of the storage jar and the floor) were kept polished stone axes, and sling stones. At a rough estimate at least 5 to 6 people could live in these small round huts

(as Boyas do today) and we find that in a terrace at Sangankal or at Tekkalkota there would be at least 10 to 15 such round huts. From this we can say that a small community of 80 to 100 people lived on each terrace and on a hill like Tekkalkota, where there are no less than 20 such terraces, could accommodate a population of about 20×100 (2,000) people at the minimum. There are numerous such hills spread from Mahebubnagar in Andhra to North Arcot District or Salem in Madras through Anantapur and parts of Cuddappa.

When I say that these people lived on these hills, it means that there was a society. Groups of people came together to build such houses and at Tekkalkota we have got definite evidence that they moved large stones and enclosed the periphery of the hills where there were no natural stones affording such privacy. And these stones were so heavy that they could be moved by not less than 5 to 10 people, on the principle of inclined plane. One may also see, paths abound with stone avenues and artificial irrigation systems for leading rain water from one terrace to another. That means there was planning and organization. The first stage of man towards civilization was reached.

Other things are also suggestive. For instance you have to look at their pottery. It is not primitive, but on the contrary highly sophisticated. There are vessels which resemble our tea pots. Other vessels looked like ice-cream cups and wine-cups because they have got a permanent pedestal or foot and then there are vessels with 4 to 5 pinched openings. Huge storage jars were also found. Thus we find that these early settlers on the hills and foot-hills had developed a way of life which leads us to the next stage.

When we look to their tools and weapons, we find that they are still of stone, but they are completely different from what I have described to you before. The tools are now beautifully ground or polished. This itself means that man had to live at one place so that these beautiful tools could be made. It takes at least a week or a fortnight to grind these tools and for grinding they had to have huge concave or boat-shaped grinding stones. These are found in these terraced hills in their natural stage.

Their sense of organisation as well as community life and their thought for the next life is again indicated by the way they disposed off the dead. We find that these people buried the dead where they lived in pits in an extended posture. Slightly later the body was kept in pots either horizontally or vertically and very often several pots were placed inside these pots. These are the precursors of coffins of the later period. From the evidence at Tekkalkota, and Brahmagiri and Piklihal, one might infer that bodies were possibly exposed and when they were sufficiently dried up, the bones were carefully picked up and re-arranged as naturally as possible and kept in the pots called urns.

We have now got several carbon-14 dates, and we can say that this culture called the Neolithic or Polished Stone Axe Culture by archæologists flourished from about 2500 B.C. to about 900 B.C. We may call it the earliest beginnings of civilization. Right from the selection of the site—castle-like hills, with flat areas or areas intentionally made flat, with round and/or square houses, often plastered with lime, furnishing these houses with highly utilitarian storage jars and sophisticated pottery, making stone tools by grinding and chipping and burying the dead with pots and pans in the houses—shows a well-organized way of life, living partly on agriculture and partly on stock-breeding and hunting.

This man was also an artist. He has left numerous paintings and bruisings in the rock shelters of men, and animals. This is further documented by exquisite pin-hole decoration on pottery from Tekkalkota.

Another " First ", these people had to their credit was the exploitation of the gold in the Raichur Doab. The earliest gold ornaments in South India were made by them. They were also the first to use copper in South India.

Unfortunately, we have no idea whether this man knew writing or not. Except for this fact, *viz.*, his knowledge of writing, we can say that he was civilized and this civilized stage is found almost all over South India except the extreme south, *viz.*, Tirunelveli District. The beginning possibly took place in Raichur and

Bellary District where there are very fine hills and easily available raw material and from this the man later spread to the Kaveri delta on the east and the Mysore plains on the west.

From where did he come? This is not known. Anthropologists who have studied the human skeletons from Brahmagiri, Piklihal, Tekkalkota and T. Narsipur think that this man might be connected very distantly, partly with the aboriginal population of South India and partly with the people from distant Iran. So even at this early date, about 2000 B.C., we can say that the population of South India was not pure but quite mixed. And this is also indicated by the stone tools and above all pottery. The pottery from Piklihal, Sangankal, Tekkalkota and T. Narasipur does suggest affinities with that of Iran and Western Asia.

Sixth Stage

How and when this man changed, we do not know. But all over South India (again except perhaps the Tirunelveli District) we find a great change come over in the man's way of living. This was first very well demonstrated at Brahmagiri where a beautiful black-topped pottery with red bottom and iron tools were found in association with stone tools and pot burials.

This is commonly called the megalithic period or culture—a time when man used underground or overground tombs made with large huned or roughly huned stone slabs. The very conception of burying the dead in such structures and the organization behind it anticipates a well-knit social order. Formerly, after the excavations at Brahmagiri, it was supposed that this great megalithic culture which has spread all over South India, in practically all the districts of Andhra, Mysore and Madras except perhaps the coastal districts on the east and the west, was not older than 250 B.C. Sir Mortimer Wheeler thought that this megalithic people who possessed iron weapons—swords and spears—and other iron tools must have ousted the Maurian Emperor from the south. But this now seems to be wrong. In fact evidence is accumulating that these megalithic cultures are at least three to four centuries older. It also appears from our own survey and excavations by

Shri A. Sundara at Terdal in the Bijapur District that some of the megaliths in the great sandstone area are earlier and belong to the Copper Age which ended in that region about 1000 B.C. (I.A.R., 1965–66, I. p. 65). This is also suggested by Tekkalkota, District Bellary. This is further corraborated by Dr. Nagaraja Rao's excavations at Hallur, Dharwar District (I.A.R., 1964–65, I.). Here we have got one of the earliest dates for the megalithic in association with chalcolithic culture and this is c. 900 B.C. (T.F. 570 and 573, I.A.R., 1965–66, V-6). If this is accepted then we can say that the further stage towards civilization in South India was taken at about this time. Of course, we are awaiting further work and confirmation of these dates.

Careful excavation has revealed how with great care, planning and organization these huge monuments were constructed. Architect and artizans, potter and the priest whoever he was, and the village or city closeby, must have joined in its preparation or completion. Hence the observation of the day of mourning as holiday.

These people, as very briefly mentioned above, used iron tools and weapons and a beautiful pottery with the black top and red bottom. They had developed certain ideas about the dead and how they should be venerated and cared for. While one can go on describing these, unfortunately, so far we do not know other aspects of the life of this great megalithic people. Almost everywhere these megalithic structures are on barren rocky terrain—either granitic or lateritic. Surveys in Chingleput District have shown that these megalithic habitations lie near artificial ponds. It is also believed that these artificial ponds were first made by the megalithic people and here for the first time we find irrigation conducted with the help of these ponds. It is quite possible that these ponds with which Andhra, Mysore and Madras are again studded with, are the creations of the megalithic people, though I would like a full archæological confirmation for this assumption.

I have already told you that our excavations at Tekkalkota Hallur and Palavoy have yielded the earliest traces of *Kulath* (*dolichos biflorus*) and *Rāgi*, two of the staple items of diet of the

agriculturists in South India. But when did rice enter their dietary? Though we have not got actual proof, I think its first use should be credited to the megalithic builders though it was known in Central India, Saurashtra and West Bengal much earlier from 2000 B.C. They must have planted rice and got at least two to three crops as the people in South India do today with their irrigation ponds and lakes. It is indeed a great pity that except for the several types of megalithic tombs, we do not know how they lived—their town and city life and even the village life. Traces of a city were found on the foot of the Brahmagiri hill. This has been identified with the ancient city of Isila. But so far no traces of any other megalithic city are available. That this megalithic people were well organized and also rich and prosperous can be easily seen from the funerary goods which besides containing iron tools and weapons and very fine pottery, also contain numerous gold beads and beads of semi-precious stones. And it is this life which is depicted in the early Tamil literature.

Recently my colleague Dr. Z. D. Ansari and Shri Rami Reddi got new evidence in their excavations at Palavoy, District Anantapur to say that the ashmounds which are almost invariably associated with Neolithic and Megalithic sites were not simple heaps of cow-dung burnt ceremoniously on occasions, but these ashmounds were indeed ovens for smelting iron. If this is established then we can further credit these people with large-scale iron smelting in South India.

Now one question remains. Did this people know writing? If they did, then they fulfil all the requirements of civilization as defined by archæologists and anthropologists. Here unfortunately the evidence is very very meagre or almost nil. It has been supposed by Fürer-Haimendorf that since the area of the megalithic culture overlapped with that of the distribution of the present Dravidian languages, Dravidian was introduced by the megalithic people. And independently of Professor Haimendorf I came to the conclusion when I saw the Asokan edicts at Maski, Brahmagiri and Kapbal that these edicts could be addressed only to people who could read and write—that is the megalith builders—and not

to their predecessors, *viz.*, the Neolithic pastoralists. Further the evidence from Arikamedu, Pondicherry shows that the early Dravidi script was allied to Brāhmi, and more than 2,000 years ago the Tamilians could read what was written by the northerners, and the northerners could read what their brethern wrote in the south. This is quite probable, though as pointed out by the late Prof. Gordon Childe, we have not got that proof for the migration of the Dravidian from Finno-Ugrian to South India as we have got for the Aryan languages. Consequently, according to the present data, the South Indian megaliths though in one essential feature identical with the Western European, *viz.*, both possess the port-hole cist, still they have been separated spatially as well as in time. The European megaliths are at least 2000 B.C. whereas even according to our new dating, we cannot place the South Indian megaliths before 700 or 900 B.C.

Here, however, I would place before you the new evidence that has been found by the discovery of stone cists by Fairservis in Eastern Las Bela in Baluchistan, West Pakistan. These cists are generally oriented east-west and they are made of upright slabs standing upto 3 ft. in height. There is a tendency for these cists to be clustered in groups on tops of ridges. Occasionally the cists have a capstone and in one case Dr. Sherman Minton found a porthole in one of the upright slabs. Unfortunately, none of these Sind-Baluchistan megaliths have been excavated. But we have evidence now, according to Fairservis, to reaffirm a rather extensive megalithic complex in the eastern portion of the Indo-Iranian border lands. So it is possible that the great megalithic builders of South India were partly indigenous and partly western-oriented, because a study of the skulls showed a mixture of the Mediterranean and Proto-Austroloid traits, like the Veddid types. This is said to be a feature of the present-day Dravidian-speakers. Thus the distant ancestors of these people seemed to have introduced iron into South India quite separately from the people who introduced iron in Northern India.

Our survey of the existing evidence shows that until about 4,000 years ago the cultural development in South India did not

materially differ from that of the rest of India. Then just as a unique civilization grew up in the Indus Valley, taking advantage of the natural factors, in the same way South India chalked out its own lines of development, according to its peculiar environment, *viz.*, castellated hills, looking down red, rocky plains, occasionally interspersed with stretches of rich fertile soil. Nature and man thus effectively combined to give the earliest South Indian Cultures their individuality.

The picture is vague and very much incomplete. But it can be amplified only when a well-organized and "a bit civilized" attempt is made to find out the habitation sites of the megalithic people as well as the habitation sites of their predecessors. It is these which hold the full secret of the beginning of civilization in South India.

Early Tamil literature, *viz.*, *Tolkāppiyam*, *Puṟanāṉūṟu*, *Maṇimēkhalai* and *Silappadikāram*, no doubt knew and does refer to several of these burial monuments. But the way they are referred to, one may infer that these practices had become old, even remote, and were considerably affected or modified by contact with the North. Though it is conceivable that the old burial grounds continued to remain in use, and the earliest Chola Kings probably buried in pots, while the Cheras preferred cremation, and the women practised *Sati*. (K. R. Srinivasan, *A.I.*, No. 2, 1946, pp. 2 ff.). That the Cholas, Cheras and Pandyas were established Kingdoms in the 3rd century B.C. is proved beyond doubt by Asokan edicts. Thus there is little doubt now that megalithism—the practice of burying in such tombs—arose some centuries before this date. Hence, archæology alone might throw more light on this problem. For the moment, we may present the picture of the beginning of South India in six or seven stages.

A CHART SHOWING THE BEGINNING OF CIVILIZATION IN SOUTH INDIA IN SIX STAGES

(2,00,000–2,200 BEFORE PRESENT)

Period	*Stage*	*Typical important sites*	*Climate*	*Flora*	*Fauna*	*Man*	*Man (Artifacts)*	*Habitations*	*Man's activities*
2,200–2,800 Before Present.	VI	(viii) Terdal (D. Bijapur) (vii) Piklihal (vi) Tekkalkota (v) Sangankal (iv) Brahmagiri (iii) Paiyampalli (ii) Amritamangalam (iA) Sanur (D. Chingleput) (i) Adichanalur	Probably as today..	As today, but with first definite traces of green gram. Rice probably first known in S. India at this time.	As today ..	Skeletal Remains—mainly skulls from Adichanalur and Brahmagiri. Proto-Australoid and Mediterranian like the Veddas of Ceylon.	(i) Fine wheelmade pottery (ii) Iron tools and weapons (iii) Ornaments of gold, copper and semi-precious stones. (iv) Construction of underground and over-ground huge stone burials.	First cities (?), Isila-Pattana, Kaveri-Pattana and villages on river banks, foothills, castellated hills with rock-shelters, Historical Kingdoms of Cholas, Cheras and Pandyas..	(i) Construction of towns and cities and several types of underground and over-ground burials. (ii) Agriculture with irrigation—artificial ponds. (iii) Iron-smelting on a large scale, all over South India. (iv) Arts and crafts. (v) Trade and Commerce. (vi) First traces of earliest Tamil in Brahmi-like script (c. 100 B.C.). (vii) Earliest Tamil literature.
2,800–4,000 Before Present.	V	(viii) Hallur (D. Dharwar) (vii) Utnoor (D. Mehbubnagar) (vi) Piklihal and Maski (D. Raichur) (v) Tekkalkota (D. Bellary) (iv) Sangankal (D. Bellary) (iiiA) Brahmagiri (D. Chitaldrug) (iii) Palavoy (D. Anantapur) (ii) T. Narasipur (D. Mysore) (i) Paiyampalli (D. North Arcot)	Probably as today or a little more humid.	Probably as today but with cultivation or collection from semi-wild state grains of Kollu or Hulgi and Ragi.	Probably as today but with definite traces of the domesticated ox/cow/pig, sheep(?) goat and horse (from Hallur).	Skeletal remains with mixed features: (i) Partly indigenous and (ii) Partly western Asiatic.	(iii) Flat Copper axes and pins. (ii) Thin blade tools. (i) Polished stone tools (axes, chisels and Adze).	First settled villages on river banks, foothills and castellated hills with rock-shelters.	(i) First traces of built houses-round, square, lime floor, with storage jars and stone fire-place or sunk-in chulahs. (ii) Burial in pits within habitation with or without pots. (iii) Pottery making. (iv) Arts and crafts—Painting, Bruising on rocks and ornaments. (v) Copper-smelting (?). (vi) Ornaments of gold, faience, stealite and semi-precious stones. (vii) Trade in rare stones and copper ingots and/or tools. (viii) Pastoralism and Domestication of animals. (ix) Agriculture with stone hoe.
4,000–10,000 Before Present.	IV	(ii) Sangankal (D. Bellary) (i) Teris of Tirunelveli District	More humid than today.	..	..	....	Very small tools of stone (microliths) blades, points, scrapers and burins.	River banks, foothills, rock-shelters and caves.	Intensive fruit collection as in III, but with now compounds tools and harvesting or cutting naturally growing grasses.
30,000–20,000 Before Present.	III	Vedachralu near Renigunta (D. Chittoor).	Probably as today..	..	..	....	Thin, long, flat, small blades of stone knife blade burins (chisels) points.	River banks, foothills, rock-shelters and caves.	Intensive food collecting in specified areas with finer tools and weapons (stone prototypes of our steel knives and chisels for cutting, slicing and engraving).
20,000–40,000 Before Present.	II	(iii) Anagwadi (ii) Giddalur (i) Attirampakkam	Probably a little more dry than to-day.	..	..	....	Comparatively light, small stone tools, points, awls and scrapers.	River banks, foothills and light forested regions away from rivers.	Food-collecting by hunting and fishing (but now *with spear and lance also*) and collecting roots and fruits.
50,000–75,000	IA	(iii) Angawadi (D. Bijapur) (ii) Giddalur (D. Kurnool) (i) Attirampakkam (D. Chingleput)	Probably as today.	..	..	....	Comparatively light, symmetrical stone tools (hand-axes and cleavers).	River banks and foothills..	Food-gathering by hunting, fishing, snaring and collecting wild fruits and roots.
2,00,000 Before Present.	I	Vadamadurai (D. Chingleput) ..	More humid than today.	..	..	....	Heavy and crude stone tools (handaxes and choppers).	River banks and foothills..	

REFERENCES

ANSARI, Z. D., AND RAMA V. REDDY: *Excavations at Palavoy, District Anantapur*, (MS).

ANSARI, Z. D., AND NAGARAJA RAO: *Excavations at Sangankal, District Bellary*, (In Press).

ALLCHIN, F. R.: *Piklihal Excavations, 1960.*

BANERJEE, N. R.: "*The Megalithic Problem of Chingleput in the light of Exploration,*" *Ancient India*, No. 12 (1956), pp. ......

BANERJEE, N. R., AND K. V. SOUNDARA RAJAN: "*Sanur* 1950 *and* 1952*: A Megalithic Site in District Chingleput,*" *Ancient India*, No. 15 (1959), pp. 4-43.

CHATTERJEE, B. K., AND P. GUPTA: *Report on the Adittanalur Skulls*, 1963.

CHILDE, GORDON: "*Megaliths,*" *Ancient India*, No. 4 (1947-48), pp. 4-14.

FAIRSERVIS, WALTER, A.: "*Problems of Post-Harappan Archæology in the Lower Indus Valley and Baluchistan*", Journal, M.S.U. of Baroda, Vol. XV, 1966, p. 33.

FURER-HAIMENDORF: *Christeph von in Indo-Asian Culture*, Vol. II (1954), p. 238, and Presidential Address, Anthropology and Archæology Section, Indian Science Congress, 1950.

KRISHNASWAMI, V. K.: "*Megalithic Types of South India,*" Ancient India No. 5 (1949), pp. 35-46.

LAL, B. B.: "*From the megalithic to Harappa*", Ancient India No. 16 (1960), pp. 4-25.

MURTY, M. L. K., *Stone Age Cultures of Chittoor*, Ph.D. Thesis (P.U. 1966).

MUJUMDAR, G. C., AND S. N. RAJAGURU: *Ashmound Excavations at Kupgal*, 1966.

NAGARAJA RAO, M. S.: *Excavations at Hallur, District Dharwar* (In Press).

NAGARAJA RAO, M. S., AND K. C. MALHOTRA: *Stone Age of Tekkalkota*, Poona 1965.

PAPPU, R. S.: *Pleistone Study of the Upper Krishna Basin*, Ph.D. Thesis (P.U. 1966).

RAO, S. R.: "*Excavations at Payampalli, District North Arcot,*" Indian Archæology—A Review.

SANKALIA, H. D.: *The Mesolithic and earlier cultures of Sangankal, District Bellary* (In Press).

SANKALIA, H. D.: "*Stone Age Hill Dwellers of South India,*" Indica, Vol. I (1964), pp. 129-40.

SANKALIA, H. D.: "*Prehistoric Migrations in South India,*" Times of India, March 1965.

SARKAR, S. S.: "*Human Skeletal Remains from Brahmagiri*," Bulletin of the Department of Anthropology, No. IX (1960), pp. 5-26.

SEN, D. K.: "*Ancient Races of India and Pakistan*," A Review, Ancient India, Nos. 20-21 (1964-65), pp. 178-205.

SHASHADRI, M.: "*Excavations at T. Narasipur, District Mysore*," Indian Archæology—A Review.

SRINIVASAN, K. R.: "*Megalith Burials . . . in Tamil Literature Tradition*," Ancient India, No. 2, 1946, pp.

SUBBARAO, B.: *Stone Age Cultures of Bellary*, 1949.

SUNDARA, A.: "*Excavations at Terdal, District Bijapur*," Indian Archæology—A Review.

THAPAR, B. K.: "*Maski 1954: A chalcolithic site of the Southern Deccan*," Ancient India, No. 13 (1957), pp. 4-143.

WHEELER, R. E. M.: "*Brahmagiri and Chandravalli, 1947. Megalithic and other cultures in Mysore State*," Ancient India, No. 4 (1947-48), pp. 180-311.

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